

CLAIM AMENDMENTS

The claims are amended as follows.

7/9/01

1. (Currently Amended) An laser apparatus, comprising:
an external cavity laser having an external cavity and a laser source ~~therein,~~
within the external cavity; and
a hermetically sealable container ~~configured to enclose~~ing said external cavity
laser in an inert atmosphere; and
an activated carbon drain positioned within said hermetically sealable container
to absorb outgassing compounds.
2. (Original) The apparatus of claim 1, wherein said inert atmosphere is
moisture controlled.
3. (Original) The apparatus of claim 1, wherein said external cavity is
tunable.
4. (Previously Amended) The apparatus of claim 3, wherein said laser source
comprises a gain medium having first and second output facets, said second output facet
having an anti-reflective coating thereon.
5. (Previously Amended) The apparatus of claim 4, wherein said external
cavity laser further comprises an end mirror, said end mirror and said first output facet of
said gain medium defining said external cavity, said gain medium to emit a beam from
said second output facet along an output path.
6. (Previously Amended) The apparatus of claim 5, further comprising a
tuning assembly operatively coupled to said end mirror and configured to adjust said end
mirror, in said hermetically sealable container.

7. (Previously Amended) The apparatus of claim 3, wherein said external cavity laser further comprises a grid generator.

8. (Previously Amended) The apparatus of claim 1, wherein said external cavity laser further comprises a channel selector.

9. (Previously Amended) The apparatus of claim 8, further comprising a tuning assembly operatively coupled to said channel selector and configured to adjust said channel selector.

10. (Currently Amended) The apparatus of claim 1 wherein, further comprising an activated carbon drain to absorb outgassing compounds that occur during operation of the laser source, positioned within said hermetically sealable container.

11. (Original) The apparatus of claim 1, further comprising a moisture trap positioned within said hermetically sealed container.

12. (Amended) The apparatus of claim 1, wherein said inert atmosphere comprises a gas selected from nitrogen, helium, neon, argon, krypton, xenon, a nitrogen-helium mix, a neon-helium mix, a krypton-helium mix, or a xenon-helium mix.

13. (Amended) The apparatus of claim 3, further comprising an optical fiber extending into said hermetically sealable container and positioned to receive optical output from said external cavity laser, and a fiber feedthrough, configured to hermetically seal said optical fiber.

14. (Currently Amended) A laser apparatus, comprising:

- (a) a gain medium having first and second output facets, said second output facet having an anti-reflective coating thereon;

- (b) an end mirror, said first output of said gain medium and said end mirror defining an external cavity, said gain medium emitting a beam along an optical path in said external cavity, said end mirror positioned in said optical path; ~~and~~
- (~~b~~c) a hermetically sealed container enclosing said external cavity within an inert, ~~moisture-controlled-atmosphere;~~ and
- (d) a moisture trap positioned within said hermetically sealed container to absorb moisture within said hermetically sealed container.

15. (Original) The apparatus of claim 14, further comprising a tuning assembly operatively coupled to said end mirror and configured to adjust said end mirror, said tuning assembly located within said hermetically sealed container.

16. (Original) The apparatus of claim 14, wherein said external cavity laser further comprises a grid generator, said grid generator positioned in said optical path in said external cavity.

17. (Original) The apparatus of claim 14, further comprising a channel selector, said channel selector positioned in said optical path in said external cavity.

18. (Original) The apparatus of claim 17, further comprising a tuning assembly operatively coupled to said channel selector and configured to adjust said channel selector, said tuning assembly positioned within said hermetically sealed container.

19. (Original) The apparatus of claim 14, further comprising an activated carbon drain positioned within said hermetically sealed container.

20. (Cancelled)

21. (Original) The apparatus of claim 14, wherein said inert atmosphere is a gas selected from nitrogen, helium, neon, argon, krypton, xenon, a nitrogen-helium mix, a krypton-helium mix, or a xenon-helium mix.

22. (Currently Amended) A method for fabricating an external cavity laser, comprising:

- (a) providing an external cavity ~~having~~;
- (b) providing a laser source therein within the external cavity; and
- (bc) hermetically sealing said external cavity laser and said laser source in an inert atmosphere within a hermetically sealed container; and
- (d) vacuum baking at least one outgassing component of said external cavity laser prior to said hermetically sealing.

23. (Previously Amended) The method of claim 22, wherein said laser source comprises a gain medium having an anti-reflective surface thereon, and said external cavity comprises an end mirror positioned in an optical path defined by a beam emitted from said gain medium.

24. (Previously Amended) The method of claim 23, further comprising providing a tuning assembly operatively coupled to said end mirror and configured to adjust said end mirror.

25. (Previously Amended) The method of claim 22, further comprising providing a grid generator within said external cavity.

26. (Previously Amended) The method of claim 22, further comprising providing a channel selector within said external cavity.

27. (Previously Amended) The method of claim 26, further comprising providing a tuning assembly operatively coupled to said channel selector and configured to adjust said channel selector.

28. (Original) The method of claim 22, further comprising vacuum baking said external cavity laser prior to said hermetically sealing.

29. (Cancelled)

30. (Original) The method of claim 22, further comprising providing an activated carbon drain in said hermetically sealed container proximate to said external cavity laser and absorbing volatile organic hydrocarbons with said activated carbon drain.

31. (Original) The method of claim 22, further comprising providing a moisture trap in said hermetically sealed container proximate to said external cavity laser and condensing moisture onto said moisture trap.

32. (Original) The method of claim 27, wherein said tuning assembly comprises a stepper motor.

33. (Currently Amended) A laser apparatus, comprising:

- (a) an external cavity laser having an external cavity and a laser source ~~therein~~within the external cavity; and
- (b) means for hermetically sealing said external cavity laser in an inert atmosphere; and
- (c) an activated carbon drain positioned within said hermetically sealable container to absorb outgassing compounds.

34. (Original) The apparatus of claim 33, further comprising means for adsorbing volatile organic compounds from said inert atmosphere.

35. (Original) The apparatus of claim 33, further comprising means for trapping moisture from said inert atmosphere.

36. (Original) The apparatus of claim 33, further comprising means for tuning said external cavity laser.

37. (Original) The apparatus of claim 33, further comprising means for tuning said external cavity laser.

38. (Previously Added) The laser apparatus of claim 1, further comprising a sacrificial surface within said hermetically sealable container, said sacrificial surface to be maintained at a temperature less than surrounding surfaces.
